IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Donoho et al. Prior Group Art Unit: 1653

Application No.: To be assigned

Parent Application Serial Number 09/691,344

Prior Application Examiner:

R. Mitra

Filed: Concurrently Herewith

Attorney Docket No.: LEX-0486-USA

Title: Novel Human Proteins and

Polynucleotides Encoding the Same

REQUEST TO MAKE PRIOR ART FROM PREVIOUS APPLICATION OF RECORD

Commissioner for Patents Alexandria, VA 22313

Sir:

The present paper constitutes Applicants' compliance with their duty of disclosure under 37 C.F.R. § 1.56. Please make all prior art of record in parent application Serial No. 09/691,344, filed October 18, 2000, of record in the present case, including that cited by the Office and Applicants. As a courtesy, copies of the Form PTO-1449s from the prior application are included herewith as **Exhibit A**.

Respectfully submitted,

March 30, 2004

Date

Lance K. Ishimoto

Reg. No. 41,866

Attorney for Applicants

LEXICON GENETICS INCORPORATED (281) 863-3333

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| | | | | Application Number | 09/691,344 |
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| | ATEMENT BY | | | First Named Inventor | Donoho |
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| | (use as many sheets | as nece | essan/) | Examiner Name | Sheila Thomas |
| Sheet | 1 | of | 2 | Attorney Docket Number | LEX-0071-USA |

| | | U.S. Patent | Document | Name of Patentee or Applicant | Date of Publication of cited Document | Pages, Columns, Lines, Where Relevant |
|-----------------------|--------------|-------------------|----------|-------------------------------|---------------------------------------|--|
| Examiner Initials* | Cite No.¹ | Number (if known) | | of Cited Document | MM-DD-YYYY | Passages or Relevant Figures Appear |
| | AA | 4,215,051 | | Schroeder et al | 07/29/80 | |
| | AB | 4,376,110 | | David et al | 03/08/83 | |
| | AC | 4,946,778 | | Ladner et al | 08/07/90 | |
| | AD | 5,837,458 | | Minshull et al | 11/17/98 | |
| | AE | 5,869,336 | | Meyer et al | 02/09/99 | |
| | AF | 5,877,397 | | Lonberg et al | 03/02/99 | |
| | AG | 6,075,181 | | Kuchedapati et al | 06/13/00 | |

| | | | | FORE | IGN PATENT DOCUMENTS | 3 | | |
|---|--|--|---------------------------------------|-----------------|--|--|--|------------|
| Examiner Initials* | Cite No.1 | Foreig | Foreign Patent Docume | | Name of Patentee or Applicant of Cited Document | Date of Publication of cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T⁴ |
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| Examiner Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | | | | opriate), title of the ne-issue number(s), | T ² | |
| | АН | Bird et al, 1988 | , "Single-Cha | in Antigen-Bin | ding Proteins", Science 242: | 423-426. | | |
| | AI | Bitter et al, 198 | 7, "Expressio | n and Secretion | on Vectors for Yeast", Metho | ds in Enzymology 153 | 3:516-544. | |
| | 1 | 1 Solostivo Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1- | | | | | | |
| | AK | AK Gautier et al, 1987, "α-DNA IV:α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physiochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641. | | | | | | |
| | AL | Greenspan et a | al, 1993, "Idio | types: structur | e and immunogenicity", FAS | SEB Journal 7:437-444 | 4. | 1_ |
| | AM Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281. | | | | | | rtoire in Phage Lambda", | <u> </u> _ |
| AN Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin sin chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883. | | | | | | | | |
| | AO Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330. | | | | | | S | |

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| | | | | Filing Date | October 18, 2000 | |
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| | | | | Group Art Unit | 1632 | |
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| Sheet | 2 | of | 2 | Attorney Docket Number | LEX-0071-USA | |

| | | OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS | 4 |
|-----------------------|--------------|---|----|
| Examiner Initials* | Cite No.' | publisher, dity and/or country where published. | 72 |
| | AP | Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149. | |
| | AQ | Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110. | |
| | AR | Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS USA 88:8972-8976. | |
| | j | Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497. | |
| | 1 | Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659. | |
| | AU | Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823. | |
| | AV | Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855. | |
| | AW | Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076. | |
| | AX | Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608. | |
| | AY | Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438. | |
| | AZ | O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531. | |
| | ВА | Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794. | |
| | ВВ | Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156. | |
| | ВС | Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451. | |
| | BD | Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593. | |
| | BE | Stein et al, 1988, "Physiochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221. | |
| | BF | Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034. | |
| | BG | constant region sequences", Nature 314:452-454. | _ |
| | вн | Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509. | |
| | BI | Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546. | |
| | ВЈ | Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570. | _ |
| | ВК | Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232 | |

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| Examiner | i · | Considered | |
| Signature | | | |

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| Group Art Unit | 1632 | | | | | |
| Examiner Name | Sheila Thomas | | | | | |
| Attorney Docket Number | LEX-0071-USA | | | | | |

| | U.S. PATENT DOCUMENTS | | | | | | | |
|--|-----------------------|-------------|--------------------------------------|-------------------------------|---------------------------------|--|--|--|
| | Cita | U.S. Patent | Document | Name of Patentee or Applicant | Date of Publication | Pages, Columns, Lines, Where Relevant | | |
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| Examiner | Cite | Foreign Patent Document | | | Name of Patentee or | Date of Publication of cited Document | Pages, Columns, Lines, Where Relevant | |
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| | BL. | 1 | WO 98/45435 | | Jacobs et al | 10/15/98 | | |
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